



March 24, 2022

The Honorable Kumar P. Barve, Chair
House Environment and Transportation Committee
House Office Building, Room 251
Annapolis, MD 21401

Re: Senate Bill 528- Climate Solutions Now Act of 2022

Dear Chair Barve and Members of the Committee:

The Maryland Department of the Environment (MDE or the Department) has reviewed SB 528 - *Climate Solutions Now Act of 2022* and would like to offer a letter of information with recommended amendments. MDE will provide amendments to the committee shortly following the hearing for consideration.

The Department strongly supports the bill's overall objective to reduce greenhouse gas (GHG) emissions. Climate change is an urgent threat, and all levels of government and nongovernment organizations must take increasingly aggressive and balanced actions to reduce GHG emissions and increase community resiliency. Maryland is a national leader in this area, realizing substantial reductions in emissions since the first Greenhouse Gas Reduction Act (GGRA) was passed in 2009, and with the Hogan administration taking bold new actions to achieve significant progress. While the Department welcomes efforts to accelerate action to combat climate change, we would like to provide information and will be offering some amendments to the bill as amended.

Overall

The Department has some concerns with the language changes to existing law. The language in the 2009 GGRA and 2016 GGRA was the result of a very comprehensive process that resulted in strong environmental protection and economic growth. Those bills were agreed upon by a wide array of interested parties, including environmental advocacy groups, labor and industry representatives, state agencies, and public citizens. Some of the language changes to the existing GGRA that are proposed by this new bill would threaten the consensus underlying current state law.

The bill declares new goals to achieve a 60% reduction in statewide GHG emissions by 2030, and net zero GHG emissions by 2045. While the Department generally finds more ambitious goals to be laudable, the committee should be aware that developing a plan for Maryland to achieve those goals through state programs while still meeting the law's requirements for economic impacts will be difficult and may even be unachievable based on what Maryland can do at the state level to reduce GHGs. Such rapid reductions will require improvements in federal programs to advance new technologies and make major infrastructure investments. The Department believes that such federal action is necessary and long overdue, but when developing a state plan, the Department cannot assume federal action at that scale.

In 2020, the bipartisan, independent Maryland Commission on Climate Change (MCCC), which includes the Senate sponsor of this legislation in its membership, unanimously approved a recommendation for Maryland to adopt similar ambitious GHG reduction goals. The MCCC recommended a different reduction goal for 2030 – at least a 50% reduction rather than a 60% reduction – and the same net-zero goal for 2045.¹ These paths are not mutually exclusive, as the goal in the GGRA sets a floor on reductions, not a ceiling. The Department has always aimed to develop plans to exceed the required reductions by as much as possible, given available technology, constraints on state authority, and the requirements in the law relating to economic benefit and other impacts.

¹ mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MCCCAnnualReport2020.pdf

On February 19, 2021, the Department submitted its comprehensive, extremely detailed 2030 GGRA Plan to the Governor and General Assembly. The well-documented and modeled plan advanced a portfolio of measures that would, if fully implemented, reduce Maryland's 2030 GHG emissions to approximately 50% below 2006 levels, in alignment with the MCCC's recommended 2030 goal.

GHG Reduction Plan Timeline and Methodology

The bill would require the Department to issue a proposed plan to achieve the new 2030 GHG reduction goals by June 30, 2023, followed by a final plan by December 31, 2023. In addition to the 2030 GHG reduction goals, the final plan would also require the Department to set the state on a path toward net-zero by 2045 by the end of 2023. The Department would like to provide feedback on that timeline. The bill's requirement for a final 2030 GHG plan following a draft by only six months does not allow for public comment and review of the numerous new mitigation programs that such a plan would need to propose, followed by material changes to program design and analysis. The Department and other state agencies would struggle to meet that deadline, as development of new mitigation programs requires significant time for research, careful analysis, and consultation among agencies and with outside experts, including other states and the MCCC. The revised 2030 GHG reduction goal would require that MDE repeat the comprehensive emissions and economic impact analysis included in the current GGRA plan process.

The bill also places some narrower methodological requirements on the GHG plan that give MDE some concern. The provision requiring that MDE shall use the global warming potential for methane over a 20-year time horizon is problematic for at least two reasons. First, it would violate national and international GHG measurement protocols, including under the Paris Climate Agreement,² by estimating methane's impact on climate change over 20 years instead of 100 years. MDE's practice is to use the 100-year value to be consistent with national and international standards, and then supplement that with estimates using the 20-year value to understand the important near-term impacts of methane emissions. Second, developing a GGRA plan that meets a 60% reduction in GHG emissions by 2030 using a 20-year value for methane is a significant shift in the development of Maryland's plan to reduce GHGs because the 20-year value nearly triples the reported near-term climate impact of methane. The methane emissions reduction measures that would need to be identified to meet the 2030 target would be unprecedented and problematic to meet within the bounds of the current GGRA.

Additionally, the bill requires the plan to include "specific estimates of the reductions expected from each greenhouse gas reduction measure included in the plan." Older versions of the GGRA plan did include such "measure-by-measure" analysis, but methodologies and models have advanced since then, and best practice among modelers and planners is now to analyze the effects of multiple measures simultaneously within an economy-wide modeling framework. This is due to many programs interacting with one another in fundamental ways, so they do not have independently attributable impacts. By analyzing such measures together, analysts can capture those interactive effects and correctly estimate what all measures achieve together, which is the most important question for economy-wide planning.

Methane Provisions

The bill would also require the Department to adopt regulations establishing surface methane emission standards for municipal solid waste (MSW) landfills by January 1, 2024. If the Department's provisions in regulations on measuring or monitoring for methane or the aircraft emissions measuring provisions exceed the costs of measuring or monitoring methane emissions in accordance with federal requirements, the state would be required to reimburse the landfill operator for 50% of the cost difference. There is no new appropriation of state funds for this section of the bill and there is no language designating what fund the 50% state match should come from.

MDE is developing proposed methane emissions regulations that would have certain provisions that are more stringent than current federal standards, and also meet federal emission guidelines that the state needs to submit to EPA for approval. In regard to the aircraft provisions, the Department recently collaborated with atmospheric researchers to evaluate the linkages between top-down aircraft-based methane measurements and bottom-up GHG emission inventory methods. A scientifically

² "Pursuant the modalities, procedures and guidelines (MPGs) for the transparency framework for action and support adopted by decision 18/CMP.1, Parties agreed to use the 100-year time-horizon GWP values from the Fifth Assessment Report of the IPCC (see [table 8.A.1](#)), or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO₂ eq ([decision 18/CMA.1, annex, paragraph 37](#))."

<https://unfccc.int/process-and-meetings/transparency-and-reporting/methods-for-climate-change-transparency/common-metrics>

defensible approach for reconciling the differences could not be identified at this time. As written, the bill does not give the Department the ability to vet the scientific or practical suitability of the aircraft measurements.

Operational Impact of Bill Provisions

In addition to the Department's concerns noted above, SB 528 would have a significant impact on the Department in several ways. The first impact is tied to the increase in the GHG emissions reductions to 60% from 2006 levels by 2030. Under the bill MDE would be required to adopt the first of two new plans by December 31, 2023, adopt regulations, and implement programs that reduce statewide GHG emissions to meet these more stringent emission reduction levels. The revised 2030 GHG reduction goal would require that MDE repeat the comprehensive emissions and economic impact analysis included in the current GGRA plan process using extended contracts with emissions and economic impact modelers. As noted above, for the 2030 GGRA Plan, emissions modeling was done on an economy-wide scale, consistent with best methodological practices, and best available models. SB 528 requires that emissions reductions be calculated for each individual measure included in the plan, even though relevant measures profoundly interact with one another, so there are not any independently attributable impacts. MDE can, however, estimate theoretical independent impacts by supplementing its economy-wide analysis approach with additional modeling scenarios that each evaluate the presence or absence of individual measures. MDE recently contracted for supplemental analysis to explore the emissions impact for a limited number of the most significant programs. The Department notes that, while the supplemental analysis is useful, the bill's required measure by measure analysis is problematic due to the interactions among measures. A full analysis of every one of the dozens of measures in the GGRA Plan would be a substantial and expensive undertaking.

SB 528 would establish a new Just Transition Employment and Retraining Working Group under the MCCC to perform various tasks, including a study, provide recommendations, and a report to the Commission and General Assembly. The working group would be staffed by MDE. The bill would also modify § 1-701 and § 1-702 of the Environment Article to require the Department, in consultation and coordination with the Commission on Environmental Justice and Sustainable Communities (CEJSC), to adopt a methodology to identify communities disproportionately affected by climate change; develop specific strategies to address environmental justice concerns, reduce emissions of GHGs and co-pollutants, and build climate equity and resilience within disproportionately affected communities; and establish goals for the percentage of state funding for GHG emission reduction measures that should be used for the benefit of disproportionately affected communities. However, both commissions are volunteer bodies with other responsibilities, so the majority of the work required under this bill would be performed by MDE. The bill would also require MDE to perform an annual analysis of spending by all state agencies on GHG reduction programs, including an evaluation of the portion of spending that benefits disadvantaged communities, according to criteria established by the CEJSC.

Under the bill, there would be a requirement for county boards of education to purchase only zero-emission vehicle (ZEV) school buses beginning in FY25. Additionally, the bill would no longer allow the use of any school bus that is not a zero-emission vehicle unless the bus has an in-service date of July 1, 2024 or before. The requirements to buy or use school buses that are ZEVs do not apply if MDE determines that there are no available ZEV school buses that meet the performance requirements for the county board's use, or if the county board is unable to obtain federal, state, or private funding sufficient to cover the incremental costs associated with contracting for the purchase or use of ZEV school buses. The bill would also require the Department to work with other state agencies, county boards and private school bus contractors to develop electric vehicle infrastructure to support ZEV school buses and prioritize available federal funding to carry out these requirements. While MDE has staffing for our current programs, the new working group of the MCCC, the additional tasks required of the CEJSC, and implementation of the ZEV school buses provisions, would cause additional workload on the Department.

This bill would create a new subtitle- "Building Energy Performance Standards" under Title 2 of the Environment Article and would require that MDE establish building energy performance standards for covered buildings that are 25,000 square feet or larger, which may include commercial, multifamily, and other types of buildings. Creating a building emissions standard was a key recommendation in the MCCC's 2021 Annual Report.

There are various GHG reduction requirements and timelines in the bill for state-owned and non-state-owned buildings. Beginning in 2025, owners of covered buildings and schools would be required to report to MDE on the direct emissions data from buildings. MDE would be required to adopt regulations that include the following provisions: energy use intensity targets by building type; special provisions/exceptions to account for building age, regional differences, unique needs of a

particular building or occupancy types, and the use of district energy systems by covered buildings; account for the needs of owners including those who are not responsible for the design, modification, fixtures or equipment of commercial tenants, those who do not have access to or control over building energy systems that are used or controlled by commercial tenants, or own buildings occupied by commercial tenants who are responsible for all maintenance and repairs to the buildings; flexibility to owners of covered buildings to comply with building energy performance standards; an alternative compliance pathway allowing an owner to pay a fee for greenhouse gas emissions attributed to the building's failure to meet energy use intensity targets; and financial incentives recommended by the Building Energy Transition Implementation Task Force. Under the bill, counties may develop and adopt a local building energy performance standard that is at least as stringent as the standards developed by the Department, but only if the local standards are approved by the Department. If a local county adopts their own standards, then the covered buildings under that county would not be subject to the statewide standards.

As mentioned above, the bill would also create a Building Energy Transition Implementation Task Force (Task Force). The goals of the Task Force would primarily focus on GHG-focused policy recommendations and the development of a plan to retrofit existing buildings to comply with Building Standards. The Task Force would study and make recommendations regarding the development of complementary programs, policies, and incentives that aim at the reduction of GHGs in buildings. Additionally, the Task Force will make recommendations on targeting incentives to electrification projects that would not otherwise result in strong returns on investment for building owners and would also develop a plan for funding the retrofit of covered buildings to comply with standards.

MDE would need to develop a program to regulate covered buildings throughout the state by establishing regulations with reduction goals and enforcing those goals, including requiring annual reports. The Department does not know precisely how many buildings would be covered, but a conservative estimate is at least 10,000 individual buildings. The legislation does not specify when MDE would be required to adopt regulations pertaining to this section and is vague as to whether both reporting requirements and building emission standards would need to be established to implement this section.

SB 528 is proposing to establish a Maryland Climate Justice Corps. The Corps would be administered by the Department and managed by the Chesapeake Bay Trust. The Department, alongside the Chesapeake Bay Trust, would be responsible for seeking federal funds and grants, as well as private donations to fund the Corps program. The Department would receive an annual appropriation of \$1,500,000 beginning in fiscal year 2024 and all funds pertaining to the Corps program would be transferred to the Chesapeake Bay Trust. The bill would establish several outreach requirements for the development of programs and the seeking of state and federal grants by the Department and the Chesapeake Bay Trust. Lastly, the bill would require that the Department produce a yearly report to the Governor and General Assembly, in consultation with the Chesapeake Bay Trust and the Corps Board, on the operating and financial statements covering the Corps program as well as a summary of activities by the Corps Board in the preceding fiscal year.

Thank you for your consideration. MDE is ready and willing to discuss compromises and will be providing amendments to the committee during your deliberation as we feel strongly that further amendments will be beneficial to the state. We will monitor SB 528 during the committee's deliberations, and I am available to answer any questions you may have. Please feel free to contact me at 410-260-6301 or at tyler.abbott@maryland.gov .

Sincerely,



Tyler Abbott

cc: George "Tad" Aburn, Director, Air and Radiation Administration
Mark Stewart, Manager, Climate Change Program